

DETAILED ACTION

Response to Amendment

1. This communication is in response to amendment filed on September 6, 2011.
Claims 12-22 are pending.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 12-22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Independent claims 12, 15, and 20 disclose “the second name server being a private name server storing internal addresses of internal elements of the second operator network, the internal addresses being of the type that should not be found by a public system, the internal addresses of internal elements including network addresses of access points of the second operator network.” This limitation is not taught in Applicant’s specification. Applicant’s invention teaches a public system finding the internal addresses (includes network addresses of access point) in order to establish a connection, yet the claimed limitation discloses the internal addresses should not be

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found. Thus, the claimed limitation is the opposite of what being taught in the specification.

The specification also does not teach “the internal addresses of internal elements including network addresses of access points.” Specification's page 5 lines 29-32 state “in addition, according to the present invention, a private operator name server PD is arranged in the operation network B, which server stores the network address of the internal elements of the operator network and other necessary information for forming a connection.” There are no internal addresses, just network addresses. The internal address and network address are two different things. Internal address is address for connection within internal network, and network address is for connecting to an outside network. Even if the internal address is interpreted as to network address, it still contains new matter because the claimed limitation teaches the internal address only contain the network address while the claim discloses the network address is a part of the internal address (the internal addresses of internal elements including network addresses).

The specification also does not teach internal elements and access points are two separate entities. According to the specification's page 5 lines 29-32, the internal elements and access points are the same entities.

Claims 13, 14, 16-19, 21, and 22 are rejected for the same reason set forth in the independent claims.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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5. Claims 12-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Independent claims 12, 15, and 20 disclose “the second name server being a private name server storing internal addresses of internal elements of the second operator network, the internal addresses being of the type that should not be found by a public system, the internal addresses of internal elements including network addresses of access points of the second operator network.” This limitation is contradictory. If the internal addresses should not be found by a public system, how does the public system contacts the internal elements as claimed (the access point is also an internal element as shown in figure 1)? It is unclear how an internal address can include a network address.

Claims 13, 14, 16-19, 21, and 22 are rejected for the same reason set forth in the independent claims.

6. Claims 20-22 are rejected as failing to define the invention in the manner required by 35 U.S.C. 112, second paragraph.

The claim(s) are narrative in form and replete with indefinite and functional or operational language. The structure which goes to make up the device must be clearly and positively specified. The structure must be organized and correlated in such a manner as to present a complete operative device. The claim(s) must be in one sentence form only. Note the format of the claims in the patent(s) cited.

Claim 21 and 22 are rejected for the same reason set forth in the independent claim above.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chin et al. (US Pat. No. 7,277,453) in view of Huitema (US Pat. No. 6,016,512) in view of Kim (US Pub. No. 2004/0218611) in view of Sbida (US Pat. No. 7,554,991).

Regarding **claims 12 and 15**, Chin discloses a method for determining a required access point for data transmission between a first operator network and at least a second operator network, the first operator network comprising a first name server and the second operator network comprising a second name server and the required access point for receiving communication from at least the first operator network (figures 2 and 4, (col. 12 lines 62-67 to col. 13 lines 1-54), the method comprising:

sending a query for a network address of a node in the second operator network, the query being directed to the first name server (col. 13 lines 12-15);

transmitting the query from the first name server to the second name server of the second operator network (col. 13 lines 16-24), the second name server being a

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private name server storing internal addresses of internal elements of the second operator network (figure 1; column 10 lines 50-67), the internal addresses being of the type that should not be found by a public system (the private IPv4 address should not be found by a public system), the internal addresses of internal elements including network addresses of access points of the second operator network (col. 12 lines 63-65);

determining the network address of the required node in the second name server (col. 13 lines 25-33);

after receiving the network address of the required access point from the second name server (col. 13 lines 33-35), transmitting, by the first name server, a query response including only the network address of the required node to a control element of the first operator network (col. 13 lines 33-37); and

setting up a connection from the control element of the first operator network to the required access point of the second network on the basis of the network address of the required access point in the query response (col. 13 lines 62-67), the required access point of the second network routing messages originated from the first operator network to an intended network address in the second network (col. 13 lines 55-67).

Chin further teaches DNS server A communicates with DNS server B through DNS-ALG GW A (network A) and DNS-ALG GW B (network B) (col. 13 lines 16-24). Chin does not explicitly teach a DNS server directly transmits a query to another DNS server. However, Huitema discloses a local server relays a DNS request to a root server

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and/or a remote server after determining that the local server does not have a requested address (figure 1; col. 1 lines 39-55). Therefore it would have been obvious to one with ordinary skill in the art at the time of the invention to implement in Chin a step of DNS server relays a request to another DNS server. The motivation is to obtain a correct answer/response from an appropriate server.

Chin further teaches the DNS response includes the gateway address (col. 10 lines 54-62; the IPv6 is the gateway address, the IPv4 is the private node address).

Chin does not teach in response to detecting a connection setup message from the first operator network to the second operator network, generating a DNS request, and return the gateway address. However, Kim discloses in response to detecting a connection setup message from the first operator network to the second operator network, generating a DNS request, and returns the gateway address (paragraph 158). Therefore it would have been obvious to one with ordinary skill in the art at the time of the invention to implement in Chin in response to detecting a connection setup message from the first operator network to the second operator network, generating a DNS request, and return the gateway address. The motivation is to obtain a public destination address (gateway address) for communication between two private address nodes.

Chin does not teach at least the second operator network is an IP Multimedia Subsystem (IMS) data transmission network. However, in the same field of endeavor, Sbida discloses an User Equipment of a mobile network connects to an IP Multimedia

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Subsystem (IMS) data transmission network (figure 1, abstract, col. 9 lines 14-20).

Therefore it would have been obvious to one with ordinary skill in the art at the time of the invention to substitute a known element (IMS network in Sbida) for another (second operator network in Chin) to obtain predictable result of data communication.

Regarding **claims 13 and 16**, all limitations in claims 12 and 15 are disclosed above. Chin further teaches wherein the second name server is a domain name server comprising, in a centralized manner, the network addresses of other network elements of the second operator network (figure 4; col. 13 lines 25-33; col. 12 lines 62-65).

Regarding **claim 14**, all limitations in claim 12 are disclosed above. Chin further teaches maintaining, in said first name server, network address data of at least one second name server for each operator network, with which the first operator network is communicating (col. 13 lines 16-24).

9. Claim 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chin et al. (US Pat. No. 7,277,453) in view of Huitema (US Pat. No. 6,016,512) in view of Kim (US Pub. No. 2004/0218611) in view of Sbida (US Pat. No. 7,554,991) in view of Callas et al. (US Pub. No. 2004/0133775).

Regarding **claim 17**, all limitations in claim 15 are disclosed above. Chin does not teach said second name server is an LDAP database. However, Callas discloses an e-mail server contains an LDAP server (paragraph 83). Therefore it would have been obvious to one with ordinary skill in the art at the time of the invention to implement in Chin an LDAP database. The motivation is to have a database containing user profiles.

10. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chin et al. (US Pat. No. 7,277,453) in view of Huitema (US Pat. No. 6,016,512) in view of Kim (US Pub. No. 2004/0218611) in view of Sbida (US Pat. No. 7,554,991) in view of Laurila (WO 2005/069,663).

Regarding **claim 18**, all limitations in claim 15 are disclosed above. Chin does not teach an interfacing network between the first and the second operator network is a GRX network. However, Laurila discloses an IMS interfaces an GPRS network (figure 1 elements 11 and 12). Therefore it would have been obvious to one with ordinary skill in the art at the time of the invention to substitute the private IP network with an IMS network and a public IP network with a GPRS network to obtain a predictable result of network compatibility.

Regarding **claim 19**, all limitations in claim 15 are disclosed above; Chin does not teach the required access point of said second network is an I-CSCF contact point. However, Laurila discloses the required access point of said second network is an I-CSCF contact point (figure 1). Therefore it would have been obvious to one with ordinary skill in the art at the time of the invention to implement in Chin the required access point of said second network is an I-CSCF contact point. The motivation is to control call session.

11. Claims 20 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chin et al. (US Pat. No. 7,277,453) in view of Huitema (US Pat. No. 6,016,512) in view of Kim (US Pub. No. 2004/0218611) in view of Sbida (US Pat. No. 7,554,991).

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Regarding **claim 20**, Chin discloses a private name server storing names arranged in an operator network: (figure 4) said private name server storing in a memory internal addresses of internal elements of the operator network (figure 1 and col. 10 lines 50-67), the internal addresses being of the type that should not be found by a public system (the addresses are private IPv4 addresses), the internal addresses of internal elements including a network address of a required access point of the operator network (col. 13 lines 25-33; col. 14 lines 28-42), the required access point being arranged to receive communication from another operator network comprising a control element implementing a call/session control function and managing the routing of messages originated from the another operator network to an intended network address in the operator network (figure 2 gateways A and B),

wherein said private name server being is arranged to receive a query from a node of the another operator network regarding a network address of the required access point of the operator network (col. 13 lines 15-24; col. 14 lines 37-43);

said private name server is arranged to determine, on the basis of the query, the network address of the required access point (col. 13 lines 25-33); and

said private name server is arranged to return only the network address of the required access point to the name server of the another operator network for transmission to the control element of the another operator network (col. 13 lines 25-33; col. 14 lines 35-43).

Chin further teaches the DNS response includes the gateway address (col. 10 lines 54-62; the IPv6 is the gateway address, the IPv4 is the private node address).

Chin does not teach querying and returning only the gateway address. However, Kim teaches receives a gateway address query and returns the gateway address (paragraph 158). Therefore it would have been obvious to one with ordinary skill in the art at the time of the invention to implement in Chin in response to detecting a connection setup message from the first operator network to the second operator network, generating a DNS request, and return the gateway address. The motivation is to obtain a public destination address (gateway address) for communication between two private address nodes.

Chin further teaches DNS server A communicates with DNS server B through DNS-ALG GW A (network A) and DNS-ALG GW B (network B) (col. 13 lines 16-24). Chin does not explicitly teach a DNS server directly transmits a query to another DNS server. However, Huitema discloses a local server relays a DNS request to a root server and/or a remote server after determining that the local server does not have a requested address (figure 1; col. 1 lines 39-55). Therefore it would have been obvious to one with ordinary skill in the art at the time of the invention to implement in Chin a step of DNS server relays a request to another DNS server. The motivation is to obtain a correct answer/response from an appropriate server.

Chin does not teach at least the second operator network is an IP Multimedia Subsystem (IMS) data transmission network. However, in the same field of endeavor,

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Sbida discloses an User Equipment of a mobile network connects to an IP Multimedia Subsystem (IMS) data transmission network (figure 1, abstract, col. 9 lines 14-20).

Therefore it would have been obvious to one with ordinary skill in the art at the time of the invention to substitute a known element (IMS network in Sbida) for another (second operator network in Chin) to obtain predictable result of data communication.

Regarding **claim 22**, all limitations in claim 20 are disclosed above. Chin further teaches said private name server is a private domain name server comprising, in a centralized manner, network addresses of other network elements of the operator network.

12. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chin et al. (US Pat. No. 7,277,453) in view of Huitema (US Pat. No. 6,016,512) in view of Kim (US Pub. No. 2004/0218611) in view of Sbida (US Pat. No. 7,554,991) in view of Callas et al. (US Pub. No. 2004/0133775).

Regarding **claim 21**, all limitations in claim 20 are disclosed above. Chin does not teach said second name server is an LDAP database. However, Callas discloses an e-mail server contains an LDAP server (paragraph 83). Therefore it would have been obvious to one with ordinary skill in the art at the time of the invention to implement in Chin an LDAP database. The motivation is to have a database containing user profiles.

Response to Arguments

13. Applicant's arguments filed September 6, 2011 have been fully considered but they are not persuasive.

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In page 8 of Remark, Applicant argues that the name servers of Chin are conventional name servers storing host addresses and not addresses of internal elements because Chin's col. 12 lines 62-65 states that only hosts H1-A and H1-B and not individual devices are registered with respective DNS servers. Examiner respectfully disagrees. First, hosts are synonymous with internal elements/devices since the hosts are members of private (internal) networks. Second, only H1-A and H1-B are disclosed to be registered with respective DNS servers because Chin describing an example of a private host H1-A in a private network contacting another private host H1-B in another private network. Thus, other hosts/devices are left out of the registration, but are understood to be registered with the DNS servers. Since the DNS servers have private hosts' private addresses, the DNS servers are private name servers.

Conclusion

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TITO PHAM whose telephone number is (571)272-4122. The examiner can normally be reached on Monday-Friday 8AM-5PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Ryman can be reached on 571-272-3152. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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